

# Does Democracy Facilitate the Economic Transition?

## An Empirical Study of Central and Eastern Europe and the Former Soviet Union

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Empirical analysis shows that democracy has facilitated economic liberalization in 25 postcommunist countries of Central and Eastern Europe and the former Soviet Union. The existence of a vibrant civil society at the start of the transition has the most explanatory power in this team's regressions.



## Summary findings

Dethier, Ghanem, and Zoli analyze whether political freedom and civil liberties help or hinder economic liberalization, using panel data from 25 postcommunist countries of Central and Eastern Europe and the former Soviet Union between 1992 and 1997.

Building on arguments and counterarguments put forth in recent literature, they identify the channels through which political freedom affects economic liberalization during the transition. Then they test the arguments empirically with an econometric framework that takes into account possible problems with simultaneity between the economic and political transitions.

Their empirical findings clearly reveal that democracy has facilitated economic liberalization in countries of Central and Eastern Europe and the former Soviet Union.

This conclusion is confirmed under various model specifications, for both ordinary and two-stage least squares procedures and using two different measures of liberalization.

The econometric results reveal that the existence of a vibrant civil society at the start of the transition has the most explanatory power in the authors' regressions.

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# **Does Democracy Facilitate the Economic Transition?**

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**The World Bank**

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## I. Introduction

The countries of Eastern Europe and the Former Soviet Union embarked on two transitions: from a command to a market economy (economic transition), and from an authoritarian political regime to a democratic one (political transition). They have had varying degrees of success on both fronts. Some countries, e.g. Hungary and Poland, have had remarkable success liberalizing their economies and their political systems. Others, e.g. Belarus and Uzbekistan, continue to have economic and political systems reminiscent of the Soviet era. This paper tries to explore the links between economic and political transitions using panel data from 25 post-communist countries in Europe and Central Asia.<sup>1</sup>

Economic theory does not give a clear answer on whether political freedoms help or hinder economic transition. Surveys presented in Rodrik (1996) and in Williamson (1994) present arguments for both sides of the debate. Balcerowicz (1997), and Balcerowicz and Gelb (1994), discussing the interplay between economic policy and democratization, argue for a “big bang” approach to economic transition, but leave open the question of whether democratic governments are better able to implement the “big bang” than authoritarian ones. The analysis in Roland (1992, 1994 and 1997) and in Dewatripont and Roland (1992) indicates that, under majority rule, time consistency and adverse selection problems generate a slow and gradualist economic transition. On the other hand, Åslund et al. (1996) argue that rent-seeking authoritarian governments slow-down stabilization policies needed in the first stage of transition.

The empirical literature presents a different picture: it indicates a strong positive correlation between political and economic reforms in the post-communist countries. Using data for 26 transition countries de Melo et al. (1996) found a correlation of 0.8 between their index of economic liberalization and the Freedom House index of political freedom. De Melo et al. (1997) use panel data to estimate the determinants of economic liberalization in transition countries. Political freedom appears with a

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<sup>1</sup> This includes all of the countries of Central and Eastern Europe (CEE) and the Former Soviet Union (FSU), except for Bosnia and Yugoslavia (Serbia and Montenegro) for which necessary data are not available.

positive and highly significant coefficient in their equation.<sup>2</sup> The Freedom House *Nations in Transit* report (1999) divides the transition countries into three groups: consolidated democracies, transitional societies, and consolidated autocracies<sup>3</sup>. It argues that political and economic freedoms are correlated with faster growth, because growth in the consolidated democracies averaged 4.7% in 1997, while transitional societies had an average growth of 1.4%, and consolidated autocracies witnessed an average economic decline of 2.8%. Clearly, an explanation for many of those empirical findings could simply be that faster growing economies are able to afford greater political freedoms, which would be consistent with the conclusion of Barro (1997) that improvements in standards of living predict increases in democracy.

Do greater political and civil freedoms help or hinder economic liberalization? Here we attempt to shed additional light on this question on the basis of the recent historical experience of 25 transition countries. We do this in two ways: we identify the channels through which political freedom could affect economic liberalization, and we then carry out empirical tests, while trying to deal with problems of simultaneity. The paper is divided into six sections. After this introduction, section II summarizes the analytical arguments—and counter-arguments—of why more political freedom could endanger the economic transition. Section III presents the estimated equation, section IV shows our empirical findings, section V provides tests of robustness and section VI summarizes the main conclusions and areas for future work.

## **II. Are Democracy and Economic Transition Incompatible?**

### **Arguments For and Against**

There are compelling arguments for why authoritarian leadership may be needed to push through reforms in the early stages of economic transition. But, there

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2 This result may be simply a reflection of simultaneity bias, since political freedom is probably not pre-determined with respect to economic liberalization.

3 According to Freedom House consolidated democracies are: the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Slovenia. They define transitional societies to include: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Kazakhstan, Kyrgyz Republic, Macedonia, Moldova, Mongolia, Romania, Russia, Slovakia, Ukraine and Yugoslavia. Freedom House identifies four consolidated autocracies: Belarus, Tajikistan, Turkmenistan, and Uzbekistan.

are equally compelling arguments as to why democratic reforms must come first to provide political space for economic liberalization.

We start by reviewing arguments put forward to explain why greater political freedom may slow down the economic transition. Proponents of this view feel that although economic reforms and political freedom are both “good”, they can unfortunately rarely be achieved at the same time. In this view, authoritarian governments may be needed to implement difficult economic reforms, that are then consolidated by successor democratic governments. Economists appear to be facing a dilemma: “on the one hand, good economic policy should produce favorable economic outcomes and therefore should prove also to be good politics; on the other hand, the implementation of good economic policy is often viewed as requiring strong and autonomous (not to say authoritarian) leadership”<sup>4</sup>. Chile is a good example of a country where economic reforms implemented by an authoritarian regime were subsequently embraced by more democratic successor governments.

The need for authoritarian leadership would be particularly true in post-communist countries, where economic reforms often involve mass layoffs and cuts in entitlements. Applying the Chilean experience to these countries, one would argue that a strong “autonomous” leadership is needed in the early stages of transition to implement economic reforms. Once the difficult part of the economic transition is implemented, the process of democratization can start. Autonomous governments may have an easier time liberalizing their economies. For instance, China was able to carry out a great deal of economic liberalization while maintaining the Communist Party firmly in power and limiting political and civil liberties. On the contrary, in Russia early political liberalization has resulted in institutional chaos and an inability to carry out economic reforms. This type of argument can be heard in many parts of the Former Soviet Union.<sup>5</sup>

Another way of presenting the preceding argument, is that autonomous leadership is needed at the beginning of transition, because electorates often turn down economic reforms even when it is known *ex ante* that they would benefit a majority of voters. Fernandez and Rodrik (1991) show that uncertainty about the impact of

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4 Rodrik (1996) p.10.

economic reforms at the level of individuals could lead a rational electorate to vote against reforms that are known to benefit a majority of them. Thus, policies that would be popular *ex-post* are often not implemented under democratic rules. For example, workers may oppose privatization, even though they believe that most of them would benefit from it, because each one of them is unsure whether she has the necessary skills to cope in the new system.<sup>6</sup>

Let us now consider arguments why political freedom may facilitate the economic transition. They are often extensions of similar arguments why political and civil liberties have a positive impact on economic growth in general.<sup>7</sup> A particularly powerful argument for post-communist countries is that only governments with some legitimacy will be able to implement and sustain policies bearing high short-term costs as is needed during transition. Democratically elected governments would tend to have greater legitimacy, particularly during transition because democracy, political freedom and civil liberties were among the most important aspirations of the people of those countries. In the absence of democratic changes, and the legitimacy they provide governments, it is hard to implement economic reforms. Even if they are implemented by non-democratic governments, there are significant uncertainties with respect to their future, which weakens their impact. Anecdotal evidence tends to support this view. In many of the Former Soviet Republics where the political transition either did not occur or was only partial (e.g. in Uzbekistan and Belarus) many members of the previous elite remained in power and economic reforms are slow and carried out in a haphazard way.

A second argument is that the institutional changes, e.g. strengthening an independent legal system or a professional civil service, that are required to ensure political freedom and democracy, are also key to the success of market reforms. Democratization can be complementary to economic transition because it creates checks and balances and new norms that help lock in economic reforms. Proponents of this view analyze the experience of Central Europe where political reforms preceded

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<sup>5</sup> For example, see the arguments of the Russian economist Vladimir Mau in Williamson (1994).

<sup>6</sup> Rodrik (1995) argues that there is a natural dynamic to the popularity of economic reforms in transition countries. For instance, reforms in the public enterprises sector, that were opposed at the outset, but were embarked upon anyhow, may eventually become popular as the probability of losing state sector jobs decline.



economic liberalization, and argue that democracy created the window of opportunity for economic transition. Roland (1997) argues that President Yeltsin made a sequencing error in 1991 when he gave priority to economic issues. Instead, he should have focussed on building consensus on new democratic institutions, a new constitution and elections. Such an approach could have made it easier for Russia to subsequently implement economic reforms.

A third argument is that democratization limits rent-seeking, because it puts in place a system of checks and balances that penalizes self-interested leaders, and therefore creates an atmosphere conducive to economic liberalization policies that typically reduce rent-seeking opportunities. As Åslund et al. (1996) argue, under communism there were no checks and balances and there was a historical legacy of exploitation. In countries that did not deal with this political issue early on in the transition one could observe that the old elite, especially state enterprise directors and political leaders, continued to have a clear advantage over other interest groups. In the absence of democratic institutional reforms, the personal interests of “red directors” and political leaders drive the political agenda, making it virtually impossible to implement liberalization policies that seek to de-monopolize the economy and open it up to competition.

To summarize, theoretical considerations, as well as anecdotal evidence from different countries can be used to support both the view that an authoritarian regime is needed to push through economic reforms and the counter-argument that democratization is a necessary condition for economic liberalization: China liberalized its economy without democratization, while Central Europe democratized, then liberalized.

### **III. The Model**

We now examine the empirical evidence on the relationship between political freedom and economic liberalization in twenty-five countries of CEE and the FSU. We adopt a broad definition of “economic liberalization”, that includes various market

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7 For example, see McMillan et al. (1991).

oriented reforms: our independent variable is the liberalization index (***LIBERALIZATION***) developed by De Melo et al. (1996), which is weighted average of three indices of liberalization in internal markets (liberalization of domestic prices and abolition of state monopolies), foreign trade liberalization (elimination of export controls and taxes; reduced import tariffs and elimination of import quotas; current account convertibility) and private sector development (privatization of small and large scale enterprises; banking reforms), respectively. The index assumes values from 0 (no liberalization) to 1 (complete liberalization).<sup>8</sup> Note that our independent variable represent the policies themselves and not the outcomes of these policies (i.e., growth or increase in material welfare). We do not presuppose any link between freedom and welfare. Rather we examine the link between freedom and the adoption of policies that can, under favorable circumstances, lead to increases in welfare.

Figure 1 shows the relation, over the period 1992-1997, between this index of liberalization and an index of civil and political liberties (***FREEDOM***), obtained from various Freedom House reports, which assumes values from 2 (no freedom) to 14 (complete freedom). The figure indicates a clear, positive relation between freedom and economic liberalization. In fact, the linear correlation coefficient is 0.86 and the Spearman rank correlation is 0.84. Does this mean that political freedom has significantly affected the economic liberalization process in the twenty-five countries in our sample? To address this question, we estimate a model that evaluates the role of freedom vis-a-vis other economic and political variables, during the transition.

Our regression model builds on earlier work by De Melo et al. (1996, 1997), but we look more in depth at the influence of political variables on economic liberalization<sup>9</sup>.

On the basis of the arguments developed in section II, the first variable we include in our regression model is the index ***FREEDOM***. In addition, we hypothesize that, not only did the democratization process have a positive impact on economic transition, but also freedom has been an important precondition for liberalization. We thus expect countries that enjoyed a higher level of freedom before the start of the transition

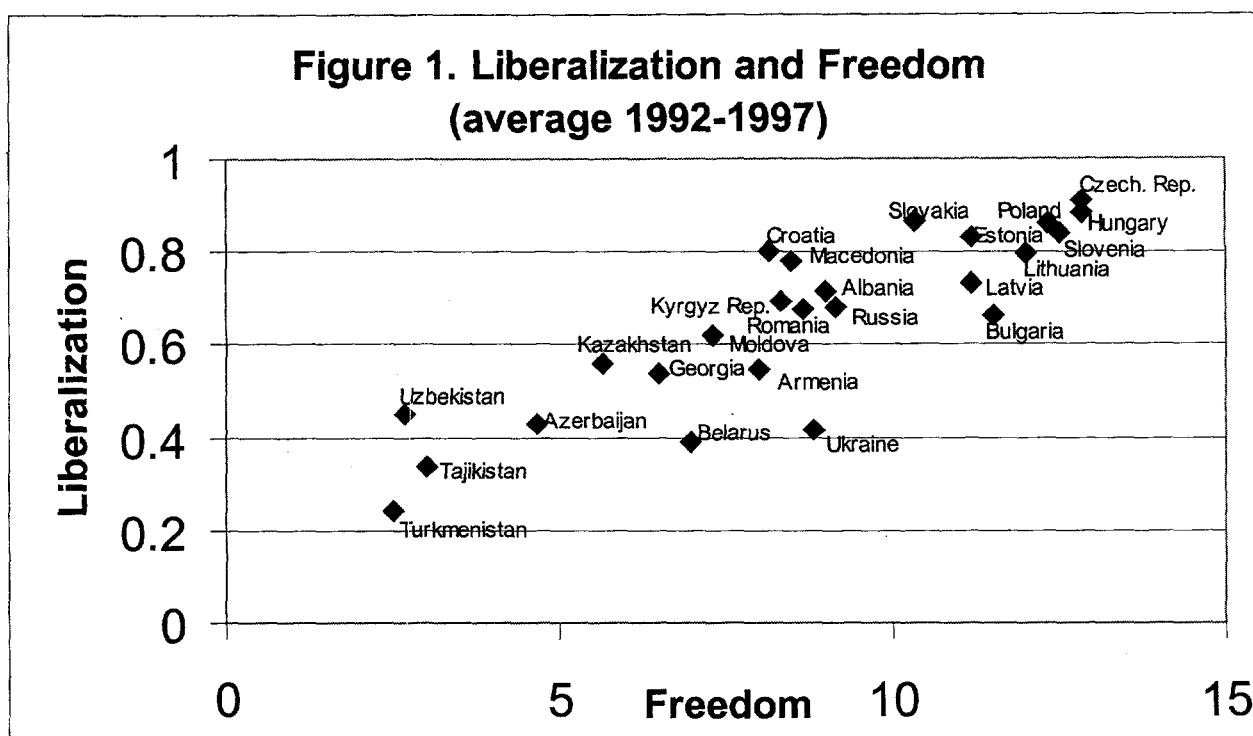
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<sup>8</sup> The variables and the data sources are described in the appendix.

<sup>9</sup> We also consider a longer period (1992-97), thus increasing the number of observations, compared to the original De Melo et al. dataset.

process to have been able to introduce more comprehensive reforms and to proceed faster to a market economy. Therefore, we include initial freedom (*INITFREEDOM*) among the explanatory variables.<sup>10</sup>

The freedom index has only an ordinal meaning and, since it is a qualitative variable, interpreting the magnitude of its coefficient in the regression is not a straightforward matter. Therefore, we also explore the relation between freedom and liberalization introducing dummy variables: the countries are divided in three groups (free, partly free and not free), on the basis of Freedom House's definition<sup>11</sup> and a dummy is assigned to free and not free countries (respectively, *FREE* and *NOTFREE*).



10 It is not always easy to identify the year when the transition actually started. It is commonly assumed that the transition started in CEE countries before FSU countries. Hence, for CEE countries, initial freedom is measured in 1989, while, for FSU countries, the reference year is 1990.

11 Freedom House defines as "free" the countries for which the average of the (reversed) political rights and civil liberties index is between 5 and 7, "partly free" those for which the average index is between 3 and 4.5, and "not free" those with a lower average.

The political economy literature suggests that the implementation of economic reforms, and so the transition process, may be delayed by government instability, for various reasons. First, high government turnover makes the introduction of reforms more difficult and increases the likelihood of policy reversals. Second, governments constantly under the threat of losing office may not be willing to introduce politically costly measures. Third, governments uncertain about the probability of being reappointed engage in suboptimal policies in order to worsen the state of the economy to be inherited by the successor<sup>12</sup>. To test these links, we introduce, as a measure of instability, the number of significant government changes (*GOVCHANGE*). “Significant” here means government changes that produce a transfer of power from one leading party to another.<sup>13</sup>

There may be also a relation between the frequency of government changes and political freedom since only in democratic countries do opposite parties alternate in power; therefore we introduce in the model the variable *FREESTAB*, which is the interaction between *FREEDOM* and *GOVCHANGE*. The variable assumes higher values for countries with greater political stability and larger freedom.

The political economy literature also suggests that fragmented governments are less able to agree on policy actions and, then, to implement reforms<sup>14</sup>; so we created an index of government cohesion (*COHESION*). This assumes values from 0 to 2 and it is constructed in the following way:<sup>15</sup> 2 is assigned to single party governments, in parliamentary systems or “not divided”<sup>16</sup> governments, in presidential systems; 1 is assigned to coalition governments, in parliamentary systems or “divided” governments, in presidential systems and 0 to minority or caretaker governments.

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12 Alesina and Tabellini (1990), Cukierman et al. (1992), Edwards and Tabellini (1992), Ozler and Tabellini (1991).

13 The distinction between government changes that do not involve a substantial turnover of leadership and those that produce a transfer of power between different political forces is commonly used in the empirical political economy literature; see for instance Alesina et al. (1992) and Grilli et al. (1991).

14 Alesina and Drazen (1991).

15 Similar variables have been employed by the empirical political economy literature in various contexts: see, for instance, Roubini and Sachs (1989 a, b), Edwards and Tabellini (1991) or Alesina and Perotti (1995).

16 In a presidential system a government is said to be “not divided” when the same party has the control of both the executive and the legislative branch.

The variable *COHESION* is constructed on the basis of the hypothesis that single party (or not divided) governments are more able to pursue liberalization policies. However, there are countries where single party governments are formed around the reconstructed former communist party. We expect this type of government to be less willing to carry out liberalization policies. Hence, we introduce the variable *COHESIDEOL*, which represents the interaction between *COHESION* and a dummy equal to 0 when the government in power is the former communist party and 1 otherwise.

We also include a dummy variable for election years (*ELECTIONS*) to assess whether the proximity of electoral consultations affects policy-makers' decisions and the variable *AID*, which is the amount of foreign aid received by the country as a percentage of GNP, to evaluate its role in the transition process. Foreign aid can help launch reforms by reducing their short-term costs (Williamson 1994), but it also reduces the cost of doing nothing, that is of avoiding reforms (Rodrik 1996).

Our model also accounts for the role played by initial conditions in the transition process, an issue specifically studied in De Melo et al. (1997). Using the principal components method, these authors have constructed two variables for that purpose. *INITMACRO*, a linear combination of variables reflecting the degree of initial macroeconomic distortions (e.g. repressed inflation, black market premium, trade dependence), and *INITDEVELOP*, a linear combination of variables reflecting the so-called "socialist development overhang," (e.g. the overall level of urbanization and over-industrialization) at the beginning of the transition. Empirically, we expect *INITMACRO* to have a negative coefficient, while the expected sign for *INITDEVELOP* is less clear.<sup>17</sup> Our model includes another initial condition, *INITREGIME* which is a dummy equal to 1 for countries where, at the start of the transition, non communist governments were in power. Finally, we introduce a dummy variable for FSU countries.

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<sup>17</sup> For a discussion on this point, see De Melo et al. (1997), p. 19.

#### IV. Empirical Findings

We can now examine our findings. Table 1 presents the results of Ordinary Least Squares (OLS) estimates of the model. The observations for the twenty-five countries over the years 1992-97 have been pooled together.<sup>18</sup> The lagged dependent variable is introduced among the regressors for two reasons: to eliminate serial correlation and, second, because the values of the variable *LIBERALIZATION*, at each moment, are expected to depend on those from the previous period, since the liberalization index assesses the progress of the economic reform process, not its pace of change.

Our estimates show that *FREEDOM* has a significant, positive impact on the liberalization process. However, the coefficients of the dummies *FREE* and *NOTFREE*, although they have the expected sign, are not significant, suggesting that it is not the absence (or presence) of freedom that has prevented (or helped) the transition to the market. It indicates on the contrary that the two processes of political and economic liberalization in the CEE and FSU countries have been strongly complementary. Note also that initial freedom (*INITFREEDOM*) always has a significant coefficient, confirming our hypothesis that democracy has been an important precondition for reform implementation.

The coefficients of the government instability variables are not significant. *COHESION* has a negative, slightly significant coefficient. Instead, *COHESIDEOL* has a positive, significant coefficient, suggesting that government cohesion has favored the transition, but only when the executive was not ran by a former communist party. The coefficients of the dummy for war torn countries always have the expected sign and are significant.

The significant, positive coefficient of the variable *AID* indicates that external help has played an important role in the liberalization process, possibly because of the conditionality attached to programs involving foreign financial assistance.<sup>19</sup> However,

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18 The choice of the 1992-97 time period has been dictated by data availability and reliability and by the disappearance of the Soviet Union by 1992, leading to the creation of independent and sovereign countries. Data on external aid are available only until 1996 so, in the regressions which include this variable, observations are for the period 1992-96.

19 The World Development Indicators data on aid do not distinguish among different types of assistance (programs, food aid, emergency assistance, etc.), each of which has diverse characteristics and different effects on the economy.

this result has to be interpreted with some caution. The direction of causality may be two-way: financial assistance may have been provided primarily to countries that had already introduced economic reforms. We also included the lagged variable, *AID(-1)*, but it turned out to be insignificant.

Concerning the role of elections, the positive significant coefficient of *ELECTION(-1)* supports the “honeymoon hypothesis” that policy-makers are more willing to introduce unpopular reforms immediately after they take office partly because they can blame their short-term cost on the outgoing former communist government (Williamson, 1994). By contrast, the coefficient of the dummy *ELECTION(+1)* is negative, indicating that reforms are slowed down in the period before elections.

In sum, our OLS estimates indicate that freedom has played an important role in promoting the liberalization process. However, the crucial issue of the direction of causality between freedom and liberalization needs to be investigated. Causality may run both ways. Formal tests of causality of the Granger type would not be reliable given the short time series. However, we can address the possible simultaneity bias between freedom and liberalization using instrumental variable methods.

Table 2 shows the results obtained by estimating the same model by Two-Stages Least Squares (2SLS), using the lagged value of *FREEDOM* as the instrument for its current value. The table shows clearly that, in such a setup, *FREEDOM* loses its significance, while the coefficients for all other variables that, in our OLS estimation (Table 1), have the expected sign and are significant, maintain their explanatory power also in the 2SLS estimates of Table 2. In particular, *INITFREEDOM* keeps its expected positive, sign and its significance in all the regressions.

**TABLE 1. OLS ESTIMATES.**Dependent variable: *LIBERALIZATION*

|  | (1)                | (2)                | (3)                | (4)                | (5)                | (6)                | (7)                |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>CONSTANT</b>                          | 0.14***<br>(2.89)  | 0.09**<br>(2.10)   | 0.09**<br>(2.70)   | 0.08***<br>(3.34)  | 0.08**<br>(2.11)   | 0.08**<br>(2.57)   | 0.11***<br>(4.23)  |
| <b>LIBERALIZATION (-1)</b>               | 0.71***<br>(15.89) | 0.72***<br>(18.0)  | 0.72***<br>(20.5)  | 0.72***<br>(17.2)  | 0.75***<br>(21.0)  | 0.74***<br>(23.2)  | 0.80***<br>(27.5)  |
| <b>FREEDOM</b>                           | 0.006*<br>(1.68)   | 0.01**<br>(2.39)   | 0.01***<br>(3.03)  | 0.01***<br>(2.62)  | 0.01***<br>(2.92)  | 0.01***<br>(2.89)  | -                  |
| <b>GOVCHANGE</b>                         | 0.005<br>(0.13)    | 0.01<br>(0.20)     | 0.01<br>(0.15)     | -                  | -                  | -                  | -                  |
| <b>FREESTAB</b>                          | 0.004<br>(0.55)    | 0.004<br>(0.52)    | 0.003<br>(0.48)    | 0.002<br>(0.84)    | -                  | -                  | -                  |
| <b>COHESIDEOL</b>                        | 0.02*<br>(1.77)    | 0.02*<br>(1.85)    | 0.02**<br>(2.07)   | 0.02**<br>(2.10)   | 0.02**<br>(2.11)   | 0.02**<br>(2.20)   | 0.02***<br>(2.63)  |
| <b>COHESION</b>                          | -0.03*<br>(1.90)   | -                  | -                  | -                  | -                  | -                  | -                  |
| <b>AID</b>                               | 0.003**<br>(2.04)  | 0.004***<br>(3.49) | 0.004***<br>(3.69) | 0.004***<br>(2.73) | 0.004***<br>(3.63) | 0.004***<br>(3.67) | 0.004***<br>(2.87) |
| <b>WAR</b>                               | -0.04**<br>(2.06)  | -0.04**<br>(2.09)  | -0.04**<br>(2.22)  | -0.04**<br>(2.06)  | -0.04**<br>(2.26)  | -0.04**<br>(2.40)  | -0.06***<br>(3.49) |
| <b>INITMACRO</b>                         | 0.00<br>(0.63)     | 0.00<br>(0.05)     | -                  | -                  | -                  | -                  | -                  |
| <b>INITDEVELOP</b>                       | -0.00<br>(0.55)    | 0.00<br>(0.37)     | -                  | -                  | -                  | -                  | -                  |
| <b>INITREGIME</b>                        | 0.02<br>(1.00)     | -                  | -                  | -                  | -                  | -                  | -                  |
| <b>INITFREEDOM</b>                       | 0.01***<br>(3.25)  | 0.01*<br>(1.93)    | 0.01**<br>(2.21)   | 0.01**<br>(2.84)   | 0.01**<br>(1.99)   | 0.01**<br>(2.33)   | 0.013***<br>(3.49) |
| <b>FSU</b>                               | -                  | -                  | -                  | -                  | 0.01<br>(0.50)     | -                  | -                  |
| <b>Adjusted R-squared</b>                | 0.91               | 0.91               | 0.91               | 0.91               | 0.91               | 0.91               | 0.91               |
| <b>F- statistic</b>                      | 107***             | 125***             | 158***             | 183***             | 182***             | 213***             | 239***             |
| <b>White test for heteroscedasticity</b> | 116.0**            | 58.5               | 50.8               | 46.9*              | 37.3               | 34.4               | 30.8**             |
| <b>Number of observations</b>            | 125                | 125                | 125                | 125                | 125                | 125                | 125                |

Absolute value of t-statistic in parenthesis. \*, \*\*, and \*\*\* mean that the coefficient is significant respectively at 10%, 5% and 1% level of confidence. The t-statistics in equation (1), (4) and (7) are obtained using the White heteroscedasticity-consistent standard errors.



**TABLE 1 (Continued). OLS ESTIMATES.**Dependent variable: **LIBERALIZATION**

|  | (8)                | (9)               | (10)               | (11)               | (12)               |
|--|--------------------|-------------------|--------------------|--------------------|--------------------|
| <b>CONSTANT</b>                          | 0.18***<br>(7.82)  | 0.20***<br>(6.92) | 0.20***<br>(6.83)  | 0.08**<br>(2.41)   | 0.09***<br>(3.50)  |
| <b>LIBERALIZATION (-1)</b>               | 0.78***<br>(25.00) | 0.78***<br>(23.4) | 0.77***<br>(22.16) | 0.72***<br>(22.3)  | 0.74***<br>(17.47) |
| <b>FREEDOM</b>                           | -                  | -                 | -                  | 0.01***<br>(3.27)  | 0.01**<br>(2.47)   |
| <b>FREE</b>                              | 0.02<br>(1.31)     | -                 | 0.02<br>(1.02)     | -                  | -                  |
| <b>NONFREE</b>                           | -                  | -0.04<br>(1.45)   | -0.03<br>(1.33)    | -                  | -                  |
| <b>COHESIDEOL</b>                        | 0.02**<br>(2.12)   | 0.01<br>(1.26)    | 0.02*<br>(1.38)    | 0.02**<br>(2.03)   | 0.02**<br>(2.28)   |
| <b>AID</b>                               | 0.003***<br>(2.79) | 0.003**<br>(2.18) | 0.003***<br>(2.38) | 0.003***<br>(3.32) | 0.004***<br>(2.86) |
| <b>WAR</b>                               | -0.04**<br>(2.44)  | -0.04**<br>(2.19) | -0.03*<br>(1.94)   | -0.04**<br>(2.27)  | -0.04**<br>(2.29)  |
| <b>INITFREEDOM</b>                       | -                  | -                 | -                  | 0.01**<br>(2.30)   | 0.01***<br>(2.78)  |
| <b>ELECTION (-1)</b>                     | -                  | -                 | -                  | 0.03**<br>(2.05)   | -                  |
| <b>ELECTION (+1)</b>                     | -                  | -                 | -                  | -                  | -0.03*<br>(1.89)   |
| <b>Adjusted R-squared</b>                | 0.90               | 0.90              | 0.90               | 0.91               | 0.91               |
| <b>F- statistic</b>                      | 229***             | 234***            | 194***             | 188***             | 189***             |
| <b>White test for heteroscedasticity</b> | 31.7**             | 32.3**            | 33.6**             | 33.4               | 56.14***           |
| <b>Number of observations</b>            | 125                | 125               | 125                | 125                | 125                |

Absolute value of t-statistic in parenthesis. \*, \*\*, and \*\*\* mean that the coefficient is significant respectively at 10%, 5% and 1% level of confidence.

The t-statistics in equations (8)-(10) and (12) are obtained using the White heteroscedasticity-consistent standard errors.

**TABLE 2. TWO-STAGE LEAST SQUARES ESTIMATES.**Dependent variable: **LIBERALIZATION**

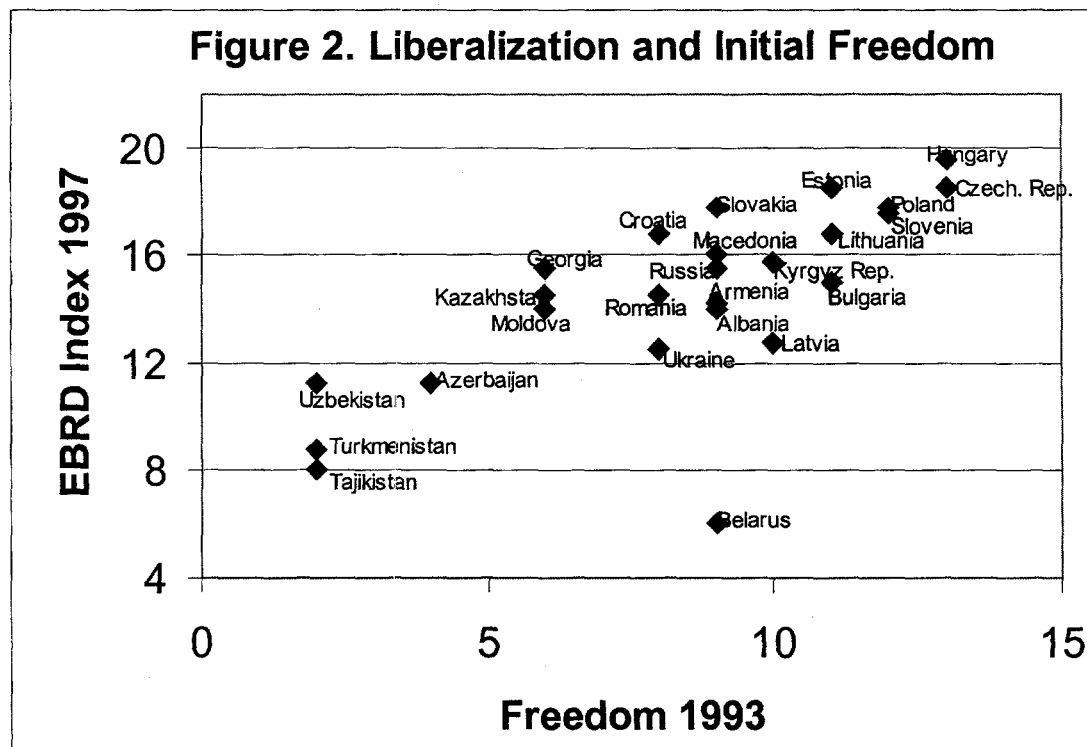
|  | (1)                | (2)                | (3)                | (4)                | (5)                | (6)                |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>CONSTANT</b>                          | 0.19***<br>(3.15)  | 0.12**<br>(2.73)   | 0.11**<br>(3.14)   | 0.11***<br>(3.14)  | 0.10***<br>(2.75)  | 0.10**<br>(3.10)   |
| <b>LIBERALIZATION (-1)</b>               | 0.75***<br>(15.18) | 0.76***<br>(17.3)  | 0.77***<br>(18.9)  | 0.78***<br>(19.1)  | 0.78***<br>(20.0)  | 0.78***<br>(21.6)  |
| <b>FREEDOM</b>                           | -0.004<br>(0.72)   | -0.001<br>(2.39)   | 0.01<br>(0.62)     | 0.002<br>(0.65)    | 0.002<br>(0.58)    | 0.002<br>(0.60)    |
| <b>GOVCHANGE</b>                         | 0.02<br>(0.48)     | 0.03<br>(0.57)     | 0.02<br>(0.36)     | -                  | -                  | -                  |
| <b>FREESTAB</b>                          | 0.004<br>(0.62)    | 0.005<br>(0.67)    | 0.003<br>(0.45)    | 0.001<br>(0.34)    | -                  | -                  |
| <b>COHESIDEOL</b>                        | 0.02<br>(1.57)     | 0.02*<br>(1.79)    | 0.02**<br>(2.36)   | 0.02**<br>(2.34)   | 0.02**<br>(2.36)   | 0.02**<br>(2.39)   |
| <b>COHESION</b>                          | -0.03*<br>(1.92)   | -                  | -                  | -                  | -                  | -                  |
| <b>AID</b>                               | 0.004***<br>(2.91) | 0.005***<br>(3.90) | 0.004***<br>(3.70) | 0.004***<br>(3.71) | 0.004***<br>(3.68) | 0.004***<br>(3.70) |
| <b>WAR</b>                               | -0.05***<br>(2.70) | -0.05***<br>(2.64) | -0.05***<br>(2.82) | -0.05***<br>(2.84) | -0.05***<br>(2.87) | -0.05***<br>(2.96) |
| <b>INITMACRO</b>                         | -0.00<br>(0.92)    | -0.00<br>(0.68)    | -                  | -                  | -                  | -                  |
| <b>INITDEVELOP</b>                       | 0.00<br>(0.47)     | 0.00<br>(1.44)     | -                  | -                  | -                  | -                  |
| <b>INITREGIME</b>                        | 0.04<br>(1.56)     | -                  | -                  | -                  | -                  | -                  |
| <b>INITFREEDOM</b>                       | 0.02***<br>(3.43)  | 0.01*<br>(1.68)    | 0.01**<br>(2.36)   | 0.01**<br>(2.37)   | 0.01**<br>(2.23)   | 0.01**<br>(2.42)   |
| <b>FSU</b>                               | -                  | -                  | -                  | -                  | 0.001<br>(0.04)    | -                  |
| <b>Adjusted R-squared</b>                | 0.90               | 0.90               | 0.91               | 0.91               | 0.91               | 0.91               |
| <b>F- statistic</b>                      | 100***             | 117***             | 151***             | 174***             | 173***             | 204***             |
| <b>White test for heteroscedasticity</b> | 112.1**            | 58.3               | 46.7               | 43.8               | 38.5               | 34.0               |
| <b>Number of observations</b>            | 125                | 125                | 125                | 125                | 125                | 125                |

Absolute value of t-statistic in parenthesis. \*, \*\*, and \*\*\* mean that the coefficient is significant respectively at 10%, 5% and 1% level of confidence. The t-statistics in equation (1) are obtained using the White heteroscedasticity-consistent standard errors.

In conclusion, the results from the 2SLS estimates indicate that there is a two-way causality between market-oriented reforms and freedom. These estimates also confirm the crucial role of freedom as a precondition for introducing economic reforms: countries that entered the transition process with more democratic institutions and greater civil liberties have been able to implement faster and more comprehensive reform policies.

### Robustness of the Results

To test the robustness of our results, in particular on the importance of freedom as a precondition for liberalization, we estimate the same model adopting a different measure for the intensity of economic reforms: we use the liberalization indicator compiled by the EBRD. We aggregated the various indicators published in the EBRD's Transition Report to construct *EBRDINDEX*. Unfortunately, since this measure is available only since 1994, initial freedom is measured in 1993 (*FREEDOM1993*). Figure 2 plots the value assumed by *EBRDINDEX* in 1997 against freedom in 1993 for our sample of countries, indicating a clear positive linear relation between the two variables.



We re-estimated our model using *EBRDINDEX* as the dependent variable. Results of the OLS estimates are reported in Table 3 <sup>20</sup>. The variable *FREEDOM* is not included among the explanatory variables because it is highly collinear with *FREEDOM1993*. The regressions in Table 3 confirm our previous findings, since the coefficients of *FREEDOM1993* have the expected sign and are significant. Note also that initial freedom is the only variable that keeps its explanatory power in the estimates that use a different definition of the dependent variable<sup>21</sup>.

We can summarize our findings by saying that our model reveals clearly that initial freedom has been a crucial determinant of economic reforms during the transition process. This conclusion is confirmed under various model specifications, for both OLS and 2SLS procedures and using two different measures of liberalization.

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<sup>20</sup> The estimation period is 1995-1997.

<sup>21</sup> Coefficients for the other political and economic variables (external aid, interaction between government cohesion and government ideology, war-torn country dummy and elections) that are significant in Table 2 are not validated when the EBRD indicator of liberalization is used.

**TABLE 3. OLS ESTIMATES.**Dependent variable: **EBRDINDEX**

|  | (1)               | (2)                | (3)               | (4)               | (5)               | (6)               | (7)               |
|--|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>CONSTANT</b>                          | 2.55***<br>(3.06) | 2.72***<br>(3.88)  | 2.92***<br>(3.16) | 2.71***<br>(3.88) | 2.6***<br>(3.18)  | 2.72***<br>(3.92) | 3.35***<br>(3.89) |
| <b>EBRDINDEX (-1)</b>                    | 0.72***<br>(8.52) | 0.73***<br>(10.73) | 0.72***<br>(10.3) | 0.72***<br>(10.7) | 0.71***<br>(8.63) | 0.72***<br>(10.8) | 0.70***<br>(6.85) |
| <b>FREEDOM1993</b>                       | 0.22**<br>(2.11)  | 0.17**<br>(2.12)   | 0.18**<br>(2.25)  | 0.19**<br>(2.34)  | 0.23**<br>(2.32)  | 0.19**<br>(2.37)  | 0.19**<br>(1.99)  |
| <b>GOVCHANGE</b>                         | 1.69<br>(0.67)    | 1.14<br>(0.73)     | -                 | -                 | -                 | -                 | -                 |
| <b>FREESTAB</b>                          | 0.38<br>(0.76)    | 0.20<br>(0.69)     | -                 | -0.001<br>(0.02)  | -                 | -                 | -                 |
| <b>COHESIDEOL</b>                        | 0.40<br>(1.47)    | 0.28<br>(1.30)     | 0.26<br>(1.22)    | 0.26<br>(1.22)    | 0.24<br>(1.34)    | 0.26<br>(1.23)    | -                 |
| <b>AID</b>                               | -0.002<br>(0.04)  | -                  | -                 | -                 | 0.00<br>(0.01)    | -                 | -                 |
| <b>WAR</b>                               | 0.65<br>(0.96)    | -                  | 0.49<br>(0.93)    | 0.49<br>(0.93)    | 0.67<br>(1.01)    | 0.48<br>(0.93)    | -                 |
| <b>FSU</b>                               | -                 | -                  | -0.13<br>(0.33)   | -                 | -                 | -                 | -                 |
| <b>Adjusted R-squared</b>                | 0.85              | 0.84               | 0.84              | 0.84              | 0.85              | 0.84              | 0.84              |
| <b>F- statistic</b>                      | 40.2***           | 65.3***            | 78.9***           | 78.7***           | 57.9***           | 99.9***           | 195.7***          |
| <b>White test for heteroscedasticity</b> | 23.2              | 20.0               | 21.1              | 19.7              | 21.8              | 18.7              | 18.1***           |
| <b>Number of observations</b>            | 50                | 75                 | 75                | 75                | 50                | 75                | 75                |

Absolute value of t-statistic in parenthesis. \*, \*\*, and \*\*\* mean that the coefficient is significant  
 Respectively at 10%, 5% and 1% level of confidence. The t-statistics in equation (7) are  
 Obtained using the White heteroscedasticity-consistent standard errors.

## V. Further Tests of Robustness

As shown in the previous sections, *INITFREEDOM* played a key role in promoting a successful transition to a market-based economy in the 25 country sample considered. We now want to further test this result in two ways. First, we introduce in the model other initial conditions that may have facilitated or hindered the transition process. Second, we divide the country sample into two groups, one including the members of the Community of Independent States (CIS countries), and the other comprising the CEE countries and the Baltics (non-CIS).

With regard to the former point, we have isolated and added to the model the following variables: the number of years under central planning (*YEARPLANN*), a dummy for countries that were independent states before 1989, rather than being members of a federation (*STATE*) and a dummy for countries geographically close to market economies (*LOCATION*). These exogenous factors may have affected the political and institutional development of the countries under consideration as well as their willingness and/or ability to adopt Western institutional models and lifestyles, including a democratic structure of the society. Hence, the important role of initial freedom by itself will be reinforced if this variable is found not to be correlated with the other initial conditions and if *INITFREEDOM* results to be significant even when these new explanatory variables are introduced in the estimated model.

The rationale for the latter approach is that, in many respects, CIS and non-CIS countries have experienced very different patterns of transition<sup>22</sup>. Hence, an important indication of robustness would be obtained if *INITFREEDOM* resulted significant for both groups of countries.

**Additional initial conditions.** As shown in Table 4 below, *INITFREEDOM* is not strongly correlated with any of the other initial conditions introduced in the model. Furthermore, as shown in Table 5, *INITFREEDOM* maintains its significance in the 2SLS and OLS estimates that include the additional explanatory variables. All this confirms, once more, that democracy *per se* considerably affected the transition

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<sup>22</sup> See, for instance, Fischer et al. (1997).

process. Note also that the other initial conditions considered had a significant impact on *LIBERALIZATION*.

TABLE 4. CORRELATION MATRIX

|                    | <i>YEARPLANN</i> | <i>LOCATION</i> | <i>STATE</i> |
|--------------------|------------------|-----------------|--------------|
| <i>INITFREEDOM</i> | 0.24             | 0.07            | -0.36        |
| <i>YEARPLANN</i>   |                  | -0.59           | -0.54        |
| <i>LOCATION</i>    |                  |                 | 0.16         |

**Dividing the sample into two groups.** Finally, we have reestimated the model for the non-CIS countries alone, to evaluate whether the findings on the important role of initial freedom for the economic transition still hold<sup>23</sup>. As shown in Table 6, the coefficients of *INITFREEDOM* are always positive and significant, which confirms that democracy has been a crucial precondition for the introduction and implementation of market-oriented reforms.

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<sup>23</sup> We could not estimate the model for the group of CIS countries alone, because of the limited variability of *INITFREEDOM* within this sub-sample.

**TABLE 5. INITIAL FREEDOM VS OTHER INITIAL CONDITIONS**Dependent variable: *LIBERALIZATION*

|  | Two-Stages Least Squares |                     | Ordinary Least Squares |                     |
|--|--------------------------|---------------------|------------------------|---------------------|
|  | (1)                      | (2)                 | (3)                    | (4)                 |
| <b>CONSTANT</b>                          | 0.25***<br>(3.81)        | 0.31***<br>(4.29)   | 0.23***<br>(4.88)      | 0.30***<br>(5.74)   |
| <b>LIBERALIZATION (-1)</b>               | 0.70***<br>(18.16)       | 0.69***<br>(18.03)  | 0.70***<br>(18.05)     | 0.69***<br>(18.19)  |
| <b>FREEDOM</b>                           | -0.00<br>(0.48)          | -0.001<br>(0.22)    | -                      | -                   |
| <b>COHESIDEOL</b>                        | 0.02***<br>(2.62)        | 0.02***<br>(2.68)   | 0.02***<br>(2.62)      | 0.02***<br>(2.69)   |
| <b>AID</b>                               | 0.004***<br>(3.90)       | 0.004***<br>(4.26)  | 0.004***<br>(5.20)     | 0.004***<br>(5.71)  |
| <b>WAR</b>                               | -0.05***<br>(2.66)       | -0.05***<br>(2.94)  | -0.05***<br>(2.73)     | -0.05***<br>(3.10)  |
| <b>INITFREEDOM</b>                       | 0.01**<br>(2.55)         | 0.01**<br>(2.34)    | 0.01***<br>(3.32)      | 0.01***<br>(3.45)   |
| <b>YEARPLANN</b>                         | -0.002**<br>(2.16)       | -0.002***<br>(2.79) | -0.002***<br>(2.71)    | -0.002***<br>(3.61) |
| <b>LOCATION</b>                          | 0.04**<br>(2.34)         | 0.04*<br>(1.89)     | 0.04**<br>(2.16)       | 0.03*<br>(1.81)     |
| <b>STATE</b>                             | -                        | -0.04*<br>(1.93)    | -                      | -0.04***<br>(3.19)  |
| <b>Adjusted R-squared</b>                | 0.91                     | 0.92                | 0.91                   | 0.92                |
| <b>F- statistic</b>                      | 163.0***                 | 150.3***            | 191.2***               | 172.0***            |
| <b>White test for heteroscedasticity</b> | 55.67*                   | 62.01               | 53.52**                | 57.49***            |
| <b>Number of observations</b>            | 125                      | 125                 | 125                    | 125                 |

Absolute value of t-statistic in parenthesis. \*, \*\*, and \*\*\* mean that the coefficient is significant Respectively at 10%, 5% and 1% level of confidence. The t-statistics in equation (4) and ( 5) are Obtained using the White heteroscedasticity-consistent standard errors.



**TABLE 6. NON-CIS COUNTRIES. TWO-STAGE LEAST SQUARES ESTIMATES.**Dependent variable: *LIBERALIZATION*

|  | (1)                | (2)                | (3)                | (4)                | (5)               |
|--|--------------------|--------------------|--------------------|--------------------|-------------------|
| <b>CONSTANT</b>                          | 0.33***<br>(4.27)  | 0.37***<br>(3.75)  | 0.26***<br>(5.50)  | 0.31***<br>(4.25)  | 0.34***<br>(3.89) |
| <b>LIBERALIZATION (-1)</b>               | 0.58***<br>(10.20) | 0.57***<br>(10.42) | 0.60***<br>(13.4)  | 0.58***<br>(10.15) | 0.57***<br>(8.82) |
| <b>FREEDOM</b>                           | -0.00<br>(0.02)    | -0.002<br>(0.32)   | 0.001<br>(0.34)    | -0.001<br>(0.17)   | -0.003<br>(0.44)  |
| <b>COHESIDEOL</b>                        | -                  | -0.01<br>(1.09)    | -                  | -                  | -                 |
| <b>AID</b>                               | -                  | -                  | 0.003***<br>(3.94) | -                  | -                 |
| <b>WAR</b>                               | -0.04<br>(1.43)    | -0.04<br>(1.48)    | -0.03<br>(1.21)    | -0.03<br>(1.32)    | -0.03<br>(1.18)   |
| <b>INITMACRO</b>                         | -                  | -                  | -                  | -                  | -0.00<br>(0.41)   |
| <b>INITDEVELOP</b>                       | -                  | -                  | -                  | -                  | 0.00***<br>(2.66) |
| <b>INITREGIME</b>                        | -                  | -                  | -                  | 0.03*<br>(1.85)    | -                 |
| <b>INITFREEDOM</b>                       | 0.01***<br>(2.67)  | 0.01**<br>(2.33)   | 0.01***<br>(2.73)  | 0.01***<br>(2.67)  | 0.01**<br>(2.21)  |
| <b>Adjusted R-squared</b>                | 0.82               | 0.91               | 0.85               | 0.81               | 0.82              |
| <b>F- statistic</b>                      | 86.6***            | 68.79***           | 71.8***            | 68.6***            | 58.6***           |
| <b>White test for heteroscedasticity</b> | 46.37***           | 54.18***           | 23.69              | 47.06***           | 55.01***          |
| <b>Number of observations</b>            | 78                 | 78                 | 65                 | 78                 | 78                |

Absolute value of t-statistic in parenthesis. \*, \*\*, and \*\*\* mean that the coefficient is significant respectively at 10%, 5% and 1% level of confidence. The t-statistics in equation (1), (2), (4) and (5) are Obtained using the White heteroscedasticity-consistent standard errors.

## VI. Conclusions

This paper has analyzed the role of political freedom and civil liberties in determining the intensity of market-oriented reforms in the transition countries of CEE and the FSU.

First, the theoretical links between democracy and economic liberalization have been identified. We have shown that there exist arguments for why authoritarian leadership may be needed to introduce reforms in the early stages of economic transition, but, that there are also arguments as to why democratic reforms must come first to provide political space for economic liberalization. Then, we have provided empirical evidence on the relationship between democracy and liberalization in 25 countries of CEE and FSU. Our findings support the hypothesis that freedom facilitates, rather than hinders, the adoption of market-oriented reforms. These empirical findings reveal that freedom and market-oriented reform policies are complementary and self-reinforcing processes. They also show that the existence of a vibrant civil society at the start of the transition process is one of the main explanatory variables for the adoption of liberalization policies. This result is robust to alternative model specifications.

Although this paper has shown that democracy facilitated the liberalization process in several transition countries, political freedom should not be seen as either a necessary or a sufficient condition for liberalization, given that some countries (for example, China) were able to implement market oriented reforms, without a fully-pledged democracy and others (such as Russia and Ukraine) were not able to introduce substantial economic reforms, even with a more democratic structure of the society.

In these conclusions, we elaborate on the above propositions, making more explicit the mechanisms that are at work. Essentially, three points have been made to argue that political freedom facilitates economic liberalization. The first is political: given the heavy short term costs entailed by economic liberalization policies, only democratically elected governments have the legitimacy to carry them out. The second is a political economy argument: the emergence of democratic political institutions changes the incentives for rent-seeking. The third argument is institutional: market

oriented reforms requires the introduction of accompanying changes in the constitutional and legal framework.

In connection with the last argument, the Freedom Index used for the empirical analysis should be viewed as a proxy for more general institutional development—the development of civil society, which predates the start of the transition by years, decades and often centuries. In fact, the constitutional and legal changes, necessary for the implementation of comprehensive market oriented reforms, can be imposed by the majority only if civil society organizations are strong enough to organize and articulate the interests of this majority. Under the socialist regime, the organizations of civil society (i.e. political parties, trade unions, etc.) were "focused narrowly on the perceived interest of the state" (EBRD 1997), although some clandestine organizations were active in several countries. When market reforms began, most countries were operating in a political and institutional vacuum: political parties (other than the Communist Party) or unions with a significant following existed in few countries only; there was no well-defined process for choosing political leaders and demarcating their powers; the press and media had no tradition of independent reporting; checks and balances did not exist; and the judicial system was unprepared to challenge the abuses of power of political leaders if necessary. Civil society developed in the transition countries as soon as governments lifted their prohibition. In Central and Eastern Europe it grew more rapidly and smoothed the progress of market oriented reforms. By contrast, in most of the former Soviet Union countries, civil society was much weaker and there was a battle for power between various factions of the elite and reformers. In some cases, the old elite was successful in resisting reforms, thus thwarting both the development of free political institutions and the introduction of economic reforms.

The recent empirical political economy literature has emphasized the importance of political parties, political rules and legal institutions in determining economic outcomes. For transition countries, while important political economy issues have been discussed in recent theoretical papers, the number of empirical studies is very limited (in large part because of unavailability of time series data). There has been relatively little empirical research on civil society. One reason is the high level of covariance between available indicators and the difficulty in finding adequate proxies

for civil society as an explanatory variable.<sup>24</sup> The Freedom House index, though adequate, is imprecise. It is not clear whether it measures the quality of institutions, of the political participation process or of individual attitudes vis-a-vis public authority. Future research should help to clarify this point, thus facilitating the identification of various channels through freedom affects economic policy (the role of media in influencing public opinion, the importance of political participation, of trust in public institutions, of transparency, etc).

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24 Campos and Nugent (1998) note a very high Spearman rank correlation coefficient between five indicators related to freedom and political participation: political rights and civil liberties (both from Freedom House), competitiveness and regulation of political participation, and "strong civil society" which is the interaction of the previous two (the latter three indicators from the Polity III data set. See Jagers and Gurr 1995)

## APPENDIX: VARIABLE DEFINITION AND DATA SOURCES

This appendix provides a description of the variables and data sources. The political variables were constructed using the following sources: Keesing's Record of World Events (various issues), the Political Handbook of the World (1998), and Szajkowski (1994).

### TIME VARYING VARIABLES:

**AID:** foreign aid as a percentage of GNP. Source: World Bank, World Development Indicators Database, 1998.

**COHESION:** index of government cohesion assuming values from 0 to 2. It is constructed in the following way: 2 is assigned to single party governments in parliamentary systems or "not divided" governments in presidential systems; the value 1 is assigned to coalition governments in parliamentary systems or "divided" governments in presidential systems; and 0 is assigned to minority or caretaker governments. Source: see above.

**COHESIDEOL:** interaction between **COHESION** and a dummy equal to zero for former Communist governments, and equal to zero otherwise.

**EBRDINDEX:** Index of economic liberalization constructed as the sum of four indices: large and small-scale privatization, enterprise restructuring, trade and foreign exchange system, and banking reform. Source: EBRD Transition Report, various issues.

**FREEDOM:** The sum of two seven-points indices for civil liberties and political rights published by Freedom House (previously, by R. Gastil). Since the two indices are highly correlated with each other (with a correlation coefficient is 0.95), they are here summed together to get **FREEDOM**, a variable which assumes values from 2 (no freedom) to 14 (complete freedom). Note that the values of the original Freedom House indices have been reversed. Source: Freedom House.

**FREESTAB:** interaction between **FREEDOM** and **GOVCHANGE**. The variable is constructed as follows. First the original (i.e. not reversed) Freedom House index of freedom is multiplied by the number of significant government changes. Second, this product is multiplied by (-1), so that higher values of **FREESTAB** are associated with countries with more freedom and fewer significant government changes. Source: see above.

**GOVCHANGE:** number of significant government changes, i.e. changes that produce a transfer of power from one leading party to another. A government change is considered significant if the following conditions hold: for a parliamentary system if there is a change in the party of the prime minister and in the coalition of parties supporting the government; for a presidential system, if there is a change in the party of either the prime minister or the president. Also irregular transfers of governments (coups) are recorded as significant government changes. Source: see above.

**LIBERALIZATION:** liberalization index. It is a weighted average of three indices that respectively account for liberalization in the internal markets, liberalization in external markets and for private sector development. The index assumes values from 0 (no liberalization) to 1 (complete liberalization). Source: De Melo et al. The indices have been update for 1997 on the basis of EBRD (1997).

**WAR:** dummy for war torn countries.

### **INITIAL CONDITIONS:**

**FREEDOM1993:** initial freedom, measured by the (reversed) Freedom House index in 1993. Source: Freedom House.

**FSU:** dummy for countries of the Former Soviet Union.

**INITDEVELOP:** measure of initial overall level of development, constructed by De Melo et al. (1997). Linear combination, obtained using the method of principal components, of variables reflecting structural development factors (per capita income, urbanization, over-industrialization, etc.). Source: De Melo et al. (1997).

**INITFREEDOM:** initial freedom, measured by the (reversed) Freedom House index. For CEE countries initial freedom is measured in 1989, for FSU countries the reference year is 1990. Source: Freedom House.

**INITMACRO:** measure of initial macroeconomic conditions, constructed by De Melo et al. (1997). Linear combination, obtained using the method of principal components, of variables reflecting the degree of initial macroeconomics distortions (trade dependence, repressed inflation and black market premium). Source: De Melo et al. (1997).

**INITREGIME:** dummy equal to 1 for countries where, at the start of the transition, non communist governments were in power. Source: see above.

**LOCATION:** dummy for countries geographically close to market economies. Source: De Melo et al. (1997).

**STATE:** dummy equal to 1 for countries that were independent states before 1989 and equal to 0 for countries that were members of a federation.

**YEARPLANN:** number of years under central planning. Source: De Melo et al. (1997).

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